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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/065,471	10/22/2002	Ronald Louis Quaglia	201-0582 GAS	5654

28395 7590 04/21/2004
BROOKS KUSHMAN P.C./FGTL
1000 TOWN CENTER
22ND FLOOR
SOUTHFIELD, MI 48075-1238

EXAMINER

KRAMER, DEVON C

ART UNIT	PAPER NUMBER
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3683

DATE MAILED: 04/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/065,471

Applicant(s)

QUAGLIA ET AL.

Examiner

Devon C Kramer

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 March 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) 3-5, 7 and 10-12 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 6, 8, 9 and 13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

- 1) The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

- 2) Claims 1 and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Heppes et al (6193024).

In reference to claim 1, Heppes et al teaches a backplate (1) for mounting a brake pad of a vehicle disk brake, the backplate having at least one hole (17) formed therein and a tuned mass damper having a mass (18) disposed within the hole and an air gap disposed between at least one surface of the tuned mass damper and the hole.

In re claims 2 and 9, Heppes et al teaches an apparatus where the hole is blind, a thinned section of the backplate forming a bottom of the hole (Figure 15a), and the tuned mass damper comprises the bottom of the hole and a mass attached directly to the bottom such that deflection of the bottom permits the tuned mass damper to oscillate relative to the backplate.

In reference to claim 8, Heppes et al provides an apparatus comprising: a brake pad (5) operative to apply a braking force to a brake rotor, said brake

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pad being subject to vibration during braking; a backplate (1) connected to the brake pad, said backplate having a hole (17) formed therein; and a tuned mass damper (18) disposed substantially within the hole in the backplate and connected to the backplate for damping vibrations associated with operation of the brake assembly, wherein an air gap is disposed between at least one surface of the tuned mass damper and the hole.

3) Claims 1 and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Stacy (3198294).

In reference to claim 1, Stacy teaches a backplate (11) for mounting a brake pad (20) of a vehicle disk brake, the backplate having at least one hole (17) formed therein and a tuned mass damper having a mass (42) disposed within the hole and an air gap disposed between at least one surface of the tuned mass damper and the hole.

In reference to claim 8, Stacy provides an apparatus comprising: a brake pad (20) operative to apply a braking force to a brake rotor, said brake pad being subject to vibration during braking; a backplate (11) connected to the brake pad, said backplate having a hole (17) formed therein; and a tuned mass damper (42) disposed substantially within the hole in the backplate and connected to the backplate for damping vibrations associated with operation of the brake assembly, wherein an air gap is disposed between at least one surface of the tuned mass damper and the hole.

Claim Rejections - 35 USC § 103

4) The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5) Claims 6 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heppes et al (6193024) or Stacy (3198294) in view of Matsuzaki (4691810).

Heppes et al and Stacy are silent to locating the hole near an anti-nodal area.

Matsuzaki teaches placing a vibration damping structure at an anti-nodal point along a brake structure. (Col 2 lines 21-26)

It would have been obvious to one of ordinary skill in the art at the time of the invention to have provided the damper of Heppes et al or Stacy at anti-nodal points as taught by Matsuzaki in order to dampen the vibrations more efficiently. By placing the damper at a nodal or anti-nodal point, the number of dampers required to reduce the vibrations are reduced.

Conclusion

6) Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

7) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Devon C Kramer whose telephone number is 703-305-0839. The examiner can normally be reached on Mon-Fri 8-4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Lavinder can be reached on 703-308-3421. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DK
April 13, 2004

Robert A. Siconolfi 4/16/04
ROBERT A. SICONOLFI
PATENT EXAMINER